

July 2015

Douglas County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 23 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Douglas County economy.¹ These 23 sectors have a total direct output of approximately \$296 million and support 1,574.2 jobs in Douglas County. Running the model for all 23 sectors simultaneously produces the following results:

Agriculture Contribution in Douglas County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	1,574.2	2%	\$88,399,075	2%	\$295,536,682	7%
Indirect Effect	324.7	1%	\$21,710,235	1%	\$38,387,678	1%
Induced Effect	255.2	0%	\$16,041,801	0%	\$27,181,559	1%
Total Effect	2,154.2	3%	\$126,151,110	3%	\$361,105,918	9%

As shown in the above table, agriculture, food, and food processing supports 2,154.2 jobs, or 3% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$361 million, roughly 9% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 23 agriculture, food, and food processing sectors is approximately \$126 million, or 3% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 3% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, All other crop farming is the top employer in the agriculture industry with 294.6 employees. This table also shows the amount of jobs that are created by the agriculture industry in Douglas County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
All other crop farming.....	294.6	\$11,041,480
Landscape and horticultural services	273.1	\$18,066,339
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	240.0	\$18,368,431
Veterinary services	165.8	\$11,305,443
Dog and cat food manufacturing	126.7	\$162,100,635
Grain farming	122.2	\$12,634,935
Bread and bakery product, except frozen, manufacturing	111.7	\$12,159,923
Support activities for agriculture and forestry	87.0	\$2,242,069
Greenhouse, nursery, and floriculture production	51.3	\$2,673,295
Wholesale trade.....	39.2	\$8,395,166

The Dog and cat food manufacturing industry directly contributes approximately \$162 million to Douglas County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Dog and cat food manufacturing	126.7	\$162,100,635
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	240.0	\$18,368,431
Landscape and horticultural services	273.1	\$18,066,339
Oilseed farming	25.6	\$16,376,542
Grain farming	122.2	\$12,634,935
Bread and bakery product, except frozen, manufacturing	111.7	\$12,159,923
Dehydrated food products manufacturing.....	27.0	\$11,533,779
Veterinary services	165.8	\$11,305,443
All other crop farming.....	294.6	\$11,041,480
Wholesale trade.....	39.2	\$8,395,166

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Douglas County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.